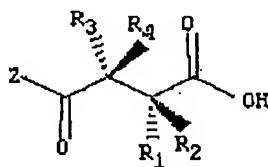


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CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A compound of general formula $Z-OC(R_{n1}R_{n2})-CO-Z$ wherein $Z = OH$ or NH_2 , and $n1 = n2 = 1$ to 8, wherein one R in the compound is selected from the group consisting of SO_3H , OSO_3H , CH_2-SO_3H , CH_2-OSO_3H , and $NHSO_3H$, and the remaining Rs are H or NH_2 , and non-toxic salts thereof.
2. (Currently Amended) A compound as claimed in claim 1 having a structure as shown below and bearing general formula $ZOC-CR_3R_4-CR_1R_2-COOH$ wherein: $Z=OH$ or NH_2 , R_1 to R_4 denotes H, NH_2 , SO_3H , or OSO_3H , CH_2-SO_3H , CH_2-OSO_3H , $NHSO_3H$

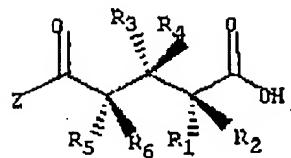


Structure 1

and non-toxic salts thereof.

3. (Currently Amended) A compound as claimed in claim 1 having a structure as shown below and bearing general formula $ZOC-CR_3R_6-CR_3R_4-CR_1R_2-COOH$ wherein: $Z=OH$ or NH_2 , R_1 to R_6 denotes H, NH_2 , SO_3H , or OSO_3H , CH_2-SO_3H , CH_2-OSO_3H , $NHSO_3H$

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Structure 2

, and non-toxic salts thereof.

4. (Currently Amended) A compound as claimed in claim 1 having a structure as shown below and bearing general formula $ZOC-CR_7R_8-CR_5R_6-CR_3R_4-CR_1R_2-COOH$ wherein: $Z=OH$ or NH_2 , R_1 to R_8 denotes H , NH_2 , SO_3H , or OSO_3H , CH_2-SO_3H , CH_2-OSO_3H , $NHSO_3H$



Structure 3

, and non-toxic salts thereof.

5. (Currently Amended) A [[C]] compound as claimed in claim 2, wherein the compound is selected from the group consisting of:

- I [L- Aspartic acid, N-Sulfonic acid],
- II [2 α ,3-dicarboxy, propane-1-sulfonic acid],
- III [2 α ,3-dicarboxy, propane-1-sulfate],
- IV [1 α ,2-carboxy ethane sulfonic acid],
- V [1 α ,2-carboxy ethane sulfate],
- VI [D-aspartic acid, N-sulfonic acid],
- VII [2 β ,3-carboxy,propane-1-sulfonic acid],
- VIII [2 β ,3-carboxy,propane-1-sulfate],
- IX [1 β ,2-carboxy ethane-1-sulfonic acid],
- X [1 β ,2-carboxy ethane-1-sulfate],

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- XI [D-aspartic acid, 3 α -sulfonic acid],
- XII [D-aspartic acid, 3 α -sulfate],
- XIII [D-aspartic acid, 3 β -sulfonic acid],
- XIV [D-aspartic acid, 3 β -sulfate],
- XV [L-asparagine, N-sulfonic acid],
- XVI [2 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVII [2 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII [1 α -carboxy, 2-carboxamido, ethane sulfonic acid],
- XIX [1 α -carboxy, 2-carboxamido, ethane sulfate],
- XX [L-asparagine, 3 α -sulfonic acid],
- XXI [L-asparagine, 3 α -sulfate],
- XXII [L-asparagine, 3 β -sulfonic acid],
- XXIII [L-asparagine, 3 β -sulfate],
- XXIV [D-asparagine, N-sulfonic acid],
- XXV [2 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XXVI [2 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XXVII [1 β -carboxy, 2-carboxamido, ethane sulfonic acid],
- XXVIII [1 β -carboxy, 2-carboxamido, ethane sulfate],
- XXIX [D-asparagine, 3 α -sulfonic acid],
- XXX [D-asparagine, 3 α -sulfate],
- XXXI [D-asparagine, 3 β -sulfonic acid],
- XXXII [D-asparagine, 3 β -sulfate],
- XXXIII [L-glutamic acid, N-sulfonic acid],
- XXXIV [2 α , 4-dicarboxy, butane-1-sulfonic acid],
- XXXV [2 α , 4-dicarboxy, butane-1-sulfate],
- XXXVI [1 α , 3-dicarboxy, propane sulfonic acid],
- XXXVII [1 α , 3-dicarboxy, propane sulfate],
- XXXVIII [1 β , 3-dicarboxy, propane sulfate], and
- XXXIX [1 β , 3-dicarboxy, propane sulfonic acid], [.]

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6. (Currently Amended) A [[C]]compound as claimed in claim 3, wherein the compound is selected from the group consisting of:

- I. [D-glutamic acid, N-sulfonic acid],
- II. [2 β , 4-dicarboxy, butane-1-sulfonic acid],
- III. [2 β , 4-dicarboxy, butane-1-sulfate],
- IV. [D-glutamic acid, 3 α -sulfonic acid],
- V. [D-glutamic acid, 3 α -sulfate],
- VI. [D-glutamic acid, 3 β -sulfonic acid],
- VII. [D-glutamic acid, 3 β -sulfate],
- VIII. [D-glutamic acid, 4 α -sulfonic acid],
- IX. [D-glutamic acid, 4 α -sulfate],
- X. [D-glutamic acid, 4 β -sulfonic acid],
- XI. [D-glutamic acid, 3 β -sulfate],
- XII. [L-glutamine, N-sulfonic acid],
- XIII. [2 α -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XIV. [2 α -carboxy, 4-carboxamido, butane-1-sulfate],
- XV. [1 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVI. [1 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVII. [1 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII. [1 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XIX. [D-glutamine, N-sulfonic acid],
- XX. [2 β -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XXI. [2 β -carboxy, 4-carboxamido, butane-1-sulfate],
- XXII. [D-glutamine, 3 α -sulfonic acid],
- XXIII. [D-glutamine, 3 α -sulfate],
- XXIV. [D-glutamine, 3 β -sulfonic acid],
- XXV. [D-glutamine, 3 β -sulfate],
- XXVI. [D-glutamine, 4 α -sulfonic acid],
- XXVII. [D-glutamine, 4 α -sulfate],
- XXVIII. [D-glutamine, 4 β -sulfonic acid],

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- XXIX. [D-glutamine, 4 β -sulfate],
- XXX. [L-homoglutamic acid, N-sulfonic acid],
- XXXI. [Pentane-2 α , 5-dicarboxy-1-sulfonic acid],
- XXXII. [Pentane-2 α , 5-dicarboxy-1-sulfate],
- XXXIII. [Butane-1 α , 4-dicarboxy-1-sulfonic acid],
- XXXIV. [Butane-1 α , 4-dicarboxy-1-sulfate],
- XXXV. [D-homoglutamic acid, N-sulfonic acid],
- XXXVI. [Pentane-2 β , 5-dicarboxy-1-sulfonic acid],
- XXXVII. [Pentane-2 β , 5-dicarboxy-1-sulfate],
- XXXVIII. [Butane-1 β , 4-dicarboxy-1-sulfonic acid], and
- XXXIX. [Butane-1 β , 4-dicarboxy-1-sulfate], [[,]]

7. (Currently Amended) A [[C]] compound as claimed in claim 4, wherein the compound is selected from the group consisting of:

- I. [D-homoglutamic acid, 3 α -sulfonic acid],
- II. [D-homoglutamic acid, 3 α -sulfate],
- III. [D-homoglutamic acid, 3 β -sulfonic acid],
- IV. [D-homoglutamic acid, 3 β -sulfate],
- V. [D-homoglutamic acid, 4 α -sulfonic acid],
- VI. [D-homoglutamic acid, 4 α -sulfate],
- VII. [D-homoglutamic acid, 4 β -sulfonic acid],
- VIII. [D-homoglutamic acid, 4 β -sulfate],
- IX. [D-homoglutamic acid, 5 α -sulfate],
- X. [D-homoglutamic acid, 5 α -sulfate],
- XI. [D-homoglutamic acid, 5 β -sulfonic acid],
- XII. [D-homoglutamic acid, 5 β -sulfate],
- XIII. [L-homoglutamine, N-sulfonic acid],
- XIV. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfonic acid],
- XV. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfate],
- XVI. [Butane-1 α -carboxy, 4-carboxamido-1-sulfonic acid],

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XVII. [Butane-1 α -carboxy, 4-carboxamido-1-sulfate],
XVIII. [D-homoglutamine, N-sulfonic acid],
XIX. [Pentane-2 β -carboxy, 5-carboxamido-1-sulfonic acid],
XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],
XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],
XXII. [D-homoglutamine, 3 α -sulfonic acid],
XXIII. [D-homoglutamine, 3 α -sulfate],
XXIV. [D-homoglutamine, 3 β -sulfonic acid],
XXV. [D-homoglutamine, 3 β -sulfate],
XXVI. [D-homoglutamine, 4 α -sulfonic acid],
XXVII. [D-homoglutamine, 4 α -sulfate],
XXVIII. [D-homoglutamine, 4 β -sulfonic acid],
XXIX. [D-homoglutamine, 4 β -sulfate],
XXX. [D-homoglutamine, 5 α -sulfonic acid],
XXXI. [D-homoglutamine, 5 α -sulfate],
XXXII. [D-homoglutamine, 5 β -sulfonic acid], and
XXXIII. [D-homoglutamine, 5 β -sulfate].

8. (Currently Amended) Novel sulfonic acid/sulfate derivatives of the The compound of claim 2, wherein:

a) Z is OH, R₂-R₄ are H, and R₁ is selected from the group consisting of SO₃H, OSO₃H, CH₂--SO₃H, CH₂--OSO₃H, and NHSO₃H.

b) Z is OH, R₁ and R₃₋₄ are H, and R₂ is selected from the group consisting of SO₃H, OSO₃H, CH₂--SO₃H, CH₂--OSO₃H, and NHSO₃H.

c) Z is OII, R₁ and R₄ are H, R₂ is NH₂, and R₃ is selected from the group consisting of SO₃H, OSO₃H, CH₂--SO₃H, CH₂--OSO₃H, and NHSO₃H.

d) Z is NH₂, R₂-R₄ are H, and R₁ is selected from the group consisting of SO₃H, OSO₃H, CH₂--SO₃H, CH₂--OSO₃H, and NHSO₃H.

e) Z is NH₂, R₁ and R₄ are H, R₂ is NH₂, and R₃ is selected from the group consisting of SO₃H, OSO₃H, CH₂--SO₃H, CH₂--OSO₃H, and NUSO₃H.

f) Z is NH₂, R₁ and R₃ are H, R₂ is NH₂, and R₄ is selected from the group consisting of SO₃H, OSO₃H, CH₂--SO₃H, CH₂--OSO₃H, and NUSO₃H, or

g) Z is NH₂, R₁ and R₃₋₄ are H, and R₂ is selected from the group consisting of SO₃H, OSO₃H, CH₂--SO₃H, CH₂--OSO₃H, and NHSO₃H.

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and non-toxic salts thereof formulae ZOC(=CR₃R₄)CR₁R₂COOII as claimed in claim 2,
wherein:

Z=OH or NH₂, R₁ to R₄ denotes H, NH₂, SO₃II, or OSO₃II, CH₂SO₃H, CH₂OSO₃H,
NHSO₃H

- I. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=H, R₁=NHSO₃H
is the same meaning as is before defined;
- II. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=H, R₁=CH₂SO₃H
is the same meaning as is before defined;
- III. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=H, R₁=CH₂OSO₃H is the same meaning as is before defined;
- IV. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=H, R₁=SO₃II is the same meaning as is before defined;
- V. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=H, R₁=OSO₃II is the same meaning as is before defined;
- VI. A compound as claimed in claim 1, wherein Z=OH, R₄=R₃=R₄=H, R₂=NHSO₃H is the same meaning as is before defined;
- VII. A compound as claimed in claim 1, wherein Z=OH, R₄=R₃=R₄=H, R₂=CH₂SO₃H is the same meaning as is before defined;
- VIII. A compound as claimed in claim 1, wherein Z=OH, R₁=R₃=R₄=H, R₂=CH₂OSO₃H is the same meaning as is before defined;
- IX. A compound as claimed in claim 1, wherein Z=OH, R₄=R₃=R₄=H, R₂=SO₃II is the same meaning as is before defined;
- X. A compound as claimed in claim 1, wherein Z=OH, R₄=R₃=R₄=H, R₂=OSO₃II is the same meaning as is before defined;
- XI. A compound as claimed in claim 1, wherein Z=OH, R₁=R₄=H, R₂=NH₂, R₃=SO₃II is the same meaning as is before defined;
- XII. A compound as claimed in claim 1, wherein Z=OH, R₁=R₄=H, R₂=NH₂, R₃=SO₃II is the same meaning as is before defined;
- XIII. A compound as claimed in claim 1, wherein Z=OH, R₁=R₃=H, R₂=NH₂, R₄=SO₃II is the same meaning as is before defined;

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XIV. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_2=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=NHSO_3H$ is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=SO_3H$ is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=NHSO_3H$ is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=CH_2SO_3H$ is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=CH_2OSO_3H$ is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=SO_3H$ is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

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XXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_3=H$, $R_2=NH_2$, $R_1=OSO_3H$ is the same meaning as is before defined.

9. (Currently Amended) Novel-sulfonic acid / sulfate derivatives of the compound of formulae ZOC₂CR₅R₆CR₃R₄CR₁R₂-COOH as claimed in claim 3

I. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=NHOSO₃H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=CH_2OSO₃H$ is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=SO_3H$ is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=OSO₃H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=SO_3H$ is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=NHOSO₃H$ is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=CH_2SO_3H$ is the same meaning as is before defined;

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X.—A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=CH_2OSO_3H$ is the same meaning as is before defined;

XI.—A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_4=R_5=R_6=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XII.—A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_5=R_6=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XIII.—A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XIV.—A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XV.—A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_3=R_6=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

XVI.—A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_5=OSO_3H$ is the same meaning as is before defined;

XVII.—A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

XVIII.—A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;

XIX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=NH_2SO_3H$ is the same meaning as is before defined;

XX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

XXI.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

XXII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_4=SO_3H$ is the same meaning as is before defined;

XXIII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

XXIV.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_4=OSO_3H$ is the same meaning as is before defined;

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XXXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=SO_3H$ is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=NHSO_3H$ is the same meaning as is before defined;

XXXVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=CH_2SO_3H$ is the same meaning as is before defined;

XXXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=CH_2OSO_3H$ is the same meaning as is before defined;

XXXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XXXIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

XXXIV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=H$, $R_2=NH_2$, $R_5=OSO_3H$ is the same meaning as is before defined;

XXXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined.

10. (Currently Amended) Novel sulfonic acid / sulfate derivatives of the compound of formula -ZOG-CR₇R₈-CR₅R₆-CR₃R₄-CR₁R₂-COOH as claimed in claim 4, wherein: $Z=OH$ or NH_2 , R_1 to R_8 denotes H , NH_2 , SO_3H , or OSO_3H , CH_2SO_3H , CH_2OSO_3H , $NHSO_3H$

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I. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=NHSO_3H$ is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

III. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=SO_3H$ is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=NHSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=SO_3H$ is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

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XVI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_2=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;

XIX. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=SO_3H$ is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_1=R_3=R_6=R_5=R_8=H$, $R_3=NH_2$, $R_7=OSO_3H$ is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=SO_3H$ is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=OSO_3H$ is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=NHISO_3H$ is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_3=R_2=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=SO_3H$ is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NHISO_3H$ is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=SO_3H$ is the same meaning as is before defined;

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XXXI. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=\text{H}$, $R_2=R_9=\text{H}$, $R_3=\text{OSO}_3\text{H}$ is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_1=R_4=R_5=R_6=R_7=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_3=\text{SO}_3\text{H}$ is the same meaning as is before defined;

XXXIII. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_4=R_5=R_6=R_7=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_3=\text{OSO}_3\text{H}$ is the same meaning as is before defined;

XXXIV. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_4=R_3=R_5=R_6=R_7=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_4=\text{SO}_3\text{H}$ is the same meaning as is before defined;

XXXV. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_1=R_3=R_5=R_6=R_7=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_4=\text{OSO}_3\text{H}$ is the same meaning as is before defined;

XXXVI. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_1=R_4=R_3=R_6=R_7=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_5=\text{SO}_3\text{H}$ is the same meaning as is before defined;

XXXVII. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_4=R_3=R_6=R_7=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_5=\text{OSO}_3\text{H}$ is the same meaning as is before defined;

XXXVIII. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_1=R_3=R_5=R_4=R_7=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_6=\text{SO}_3\text{H}$ is the same meaning as is before defined;

XXXIX. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_1=R_3=R_5=R_4=R_7=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_6=\text{OSO}_3\text{H}$ is the same meaning as is before defined;

XL. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_1=R_4=R_3=R_6=R_5=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_7=\text{SO}_3\text{H}$ is the same meaning as is before defined;

XLI. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_1=R_4=R_3=R_6=R_5=R_8=\text{H}$, $R_2=\text{NH}_2$, $R_7=\text{OSO}_3\text{H}$ is the same meaning as is before defined;

XLII. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_1=R_3=R_5=R_4=R_7=R_6=\text{H}$, $R_2=\text{NH}_2$, $R_8=\text{SO}_3\text{H}$ is the same meaning as is before defined;

XLIII. A compound as claimed in claim 1, wherein $Z=\text{NH}_2$, $R_4=R_3=R_5=R_4=R_7=R_6=\text{H}$, $R_2=\text{NH}_2$, $R_8=\text{OSO}_3\text{H}$ is the same meaning as is before defined; .

11. (Currently Amended) A [[C]] compound as claimed in claim 5, wherein said compound is a non-toxic salts salt selected from the group consisting of:

I. [L-Aspartic acid, N-Sulfonic acid],

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- II. [2 α ,3-dicarboxy, propane-1-sulfonic acid],
- III. [2 α ,3-dicarboxy, propane-1-sulfate],
- IV. [1 α ,2-carboxy ethane sulfonic acid],
- V. [1 α ,2-carboxy ethane sulfate].
- VI. [D-aspartic acid, N-sulfonic acid],
- VII. [2 β ,3-carboxy,propane-1-sulfonic acid],
- VIII. [2 β ,3-carboxy,propane-1-sulfate],
- IX. [1 β ,2-carboxy ethane-1-sulfonic acid],
- X. [1 β ,2-carboxy ethane-1-sulfate],
- XI. [D-aspartic acid, 3 α -sulfonic acid],
- XII. [D-aspartic acid, 3 α -sulfate].
- XIII. [D-aspartic acid, 3 β -sulfonic acid],
- XIV. [D-aspartic acid, 3 β -sulfato],
- XV. [L-asparagine,N-sulfonic acid],
- XVI. [2 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVII. [2 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII. [1 α -carboxy, 2-carboxamido, ethane sulfonic acid],
- XIX. [1 α -carboxy, 2-carboxamido, ethane sulfate],
- XX. [L-asparagine, 3 α -sulfonic acid],
- XXI. [L-asparagine, 3 α -sulfate],
- XXII. [L-asparagine, 3 β -sulfonic acid],
- XXIII. [L-asparagine, 3 β -sulfate],
- XXIV. [D-asparagine, N-sulfonic acid],
- XXV. [2 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XXVI. [2 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XXVII. [1 β -carboxy, 2-carboxamido, ethane sulfonic acid],
- XXVIII. [1 β -carboxy, 2-carboxamido, ethane sulfate],
- XXIX. [D-asparagine, 3 α -sulfonic acid],
- XXX. [D-asparagine, 3 α -sulfate],
- XXXI. [D-asparagine, 3 β -sulfonic acid].

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- XXXII. [D-asparagine, 3 β -sulfate],
- XXXIII. [L-glutamic acid, N-sulfonic acid],
- XXXIV. [2 α ,4-dicarboxy, butane-1-sulfonic acid],
- XXXV. [2 α , 4-dicarboxy, butane-1-sulfate],
- XXXVI. [1 α , 3-dicarboxy, propane sulfonic acid],
- XXXVII. [1 α , 3-dicarboxy, propane sulfate],
- XXXVIII. [1 β , 3-dicarboxy, propane sulfate], and
- XXXIX. [1 β , 3-dicarboxy, propane sulfonic acid].[[,]]

12. (Currently Amended) A [[C]] compound as claimed in claim 6, wherein said compound is a non-toxic salts salt selected from the group consisting of:

- I. [D-glutamic acid, N-sulfonic acid],
- II. [2 β , 4-dicarboxy, butane-1-sulfonic acid],
- III. [2 β , 4-dicarboxy, butane-1-sulfate],
- IV. [D-glutamic acid, 3 α -sulfonic acid],
- V. [D-glutamic acid, 3 α -sulfate],
- VI. [D-glutamic acid, 3 β -sulfonic acid],
- VII. [D-glutamic acid, 3 β -sulfate],
- VIII. [D-glutamic acid, 4 α -sulfonic acid],
- IX. [D-glutamic acid, 4 α -sulfate],
- X. [D-glutamic acid, 4 β -sulfonic acid],
- XI. [D-glutamic acid, 3 β -sulfate],
- XII. [L-glutamine, N-sulfonic acid],
- XIII. [2 α -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XIV. [2 α -carboxy, 4-carboxamido, butane-1-sulfate],
- XV. [1 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVI. [1 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVII. [1 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII. [1 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XIX. [D-glutamine, N-sulfonic acid],

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- XX. [2 β -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XXI. [2 β -carboxy, 4-carboxamido, butane-1-sulfate],
- XXII. [D-glutamine, 3 α -sulfonic acid],
- XXIII. [D-glutamine, 3 α -sulfate],
- XXIV. [D-glutamine, 3 β -sulfonic acid],
- XXV. [D-glutamine, 3 β -sulfate],
- XXVI. [D-glutamine, 4 α -sulfonic acid],
- XXVII. [D-glutamine, 4 α -sulfate],
- XXVIII. [D-glutamine, 4 β -sulfonic acid],
- XXIX. [D-glutamine, 4 β -sulfate],
- XXX. [L-homoglutamic acid, N-sulfonic acid],
- XXXI. [Pentane-2 α , 5-dicarboxy-1-sulfonic acid],
- XXXII. [Pentane-2 α , 5-dicarboxy-1-sulfate],
- XXXIII. [Butane-1 α , 4-dicarboxy-1-sulfonic acid],
- XXXIV. [Butane-1 α , 4-dicarboxy-1-sulfate],
- XXXV. [D-homoglutamic acid, N-sulfonic acid],
- XXXVI. [Pentane-2 β , 5-dicarboxy-1-sulfonic acid],
- XXXVII. [Pentane-2 β , 5-dicarboxy-1-sulfate],
- XXXVIII. [Butane-1 β , 4-dicarboxy-1-sulfonic acid], and
- XXXIX. [Butane-1 β , 4-dicarboxy-1-sulfate].[[.]]

13. (Currently Amended) A [[C]] compound as claimed in claim 7, wherein said compound is a non-toxic salts salt selected from the group consisting of:

- I. [D-homoglutamic acid, 3 α -sulfonic acid],
- II. [D-homoglutamic acid, 3 α -sulfate],
- III. [D-homoglutamic acid, 3 β -sulfonic acid],
- IV. [D-homoglutamic acid, 3 β -sulfate],
- V. [D-homoglutamic acid, 4 α -sulfonic acid],
- VI. [D-homoglutamic acid, 4 α -sulfate],
- VII. [D-homoglutamic acid, 4 β -sulfonic acid],

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- VIII. [D-homoglutamic acid, 4 β -sulfate],
- IX. [D-homoglutamic acid, 5 α -sulfate],
- X. [D-homoglutamic acid, 5 α -sulfate],
- XI. [D-homoglutamic acid, 5 β -sulfonic acid],
- XII. [D-homoglutamic acid, 5 β -sulfate],
- XIII. [L-homoglutamine, N-sulfonic acid],
- XIV. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfonic acid],
- XV. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfate],
- XVI. [Butane-1 α -carboxy, 4-carboxamido-1-sulfonic acid],
- XVII. [Butane-1 α -carboxy, 4-carboxamido-1-sulfate],
- XVIII. [D-homoglutamine, N-sulfonic acid],
- XIX. [Pentane-2 β -carboxy, 5-carboxamido-1-sulfonic acid],
- XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],
- XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],
- XXII. [D-homoglutamine, 3 α -sulfonic acid],
- XXIII. [D-homoglutamine, 3 α -sulfate],
- XXIV. [D-homoglutamine, 3 β -sulfonic acid],
- XXV. [D-homoglutamine, 3 β -sulfate],
- XXVI. [D-homoglutamine, 4 α -sulfonic acid],
- XXVII. [D-homoglutamine, 4 α -sulfate],
- XXVIII. [D-homoglutamine, 4 β -sulfonic acid],
- XXIX. [D-homoglutamine, 4 β -sulfate],
- XXX. [D-homoglutamine, 5 α -sulfonic acid],
- XXXI. [D-homoglutamine, 5 α -sulfate],
- XXXII. [D-homoglutamine, 5 β -sulfonic acid], and
- XXXIII. [D-homoglutamine, 5 β -sulfate].

14. (Currently Amended) A compound as claimed in claim 11, wherein said compound is selected from the group consisting of aspartic acid, asparagine and corresponding de-amino-analog:

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- I. [L-Aspartic acid, N-Sulfonic acid],
- II. [2 α ,3-dicarboxy, propane-1-sulfonic acid],
- III. [2 α ,3-dicarboxy, propane-1-sulfate],
- IV. [1 α ,2-carboxy ethane sulfonic acid],
- V. [1 α ,2-carboxy ethane sulfate],
- VI. [D-aspartic acid, N-sulfonic acid],
- VII. [2 β ,3-carboxy,propane-1-sulfonic acid],
- VIII. [2 β ,3-carboxy,propane-1-sulfate],
- IX. [1 β ,2-carboxy ethane-1-sulfonic acid],
- X. [1 β ,2-carboxy ethane-1-sulfate],
- XI. [D-aspartic acid, 3 α -sulfonic acid],
- XII. [D-aspartic acid, 3 α -sulfate],
- XIII. [D-aspartic acid, 3 β -sulfonic acid],
- XIV. [D-aspartic acid, 3 β -sulfate],
- XV. [L-asparagine,N-sulfonic acid],
- XVI. [2 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVII. [2 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII. [1 α -carboxy, 2-carboxamido, ethane sulfonic acid],
- XIX. [1 α -carboxy, 2-carboxamido, ethane sulfate],
- XX. [L-asparagine, 3 α -sulfonic acid],
- XXI. [L-asparagine, 3 α -sulfate],
- XXII. [L-asparagine, 3 β -sulfonic acid],
- XXIII. [L-asparagine, 3 β -sulfate],
- XXIV. [D-asparagine, N-sulfonic acid],
- XXV. [2 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XXVI. [2 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XXVII. [1 β -carboxy, 2-carboxamido, ethane sulfonic acid],
- XXVIII. [1 β -carboxy, 2-carboxamido, ethane sulfate],
- XXIX. [D-asparagine, 3 α -sulfonic acid],
- XXX. [D-asparagine, 3 α -sulfate],

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XXXI. [D-asparagine, 3 β -sulfonic acid], and
XXXII. [D-asparagine, 3 β -sulfate], [,,]

15. (Currently Amended) A compound as claimed in claim 12, wherein said compound is selected from the group consisting of ~~glutamino-acid, glutamine and corresponding de-~~ amino analogs:

- I. [L-glutamic acid, N-sulfonic acid],
- II. [2 α ,4-dicarboxy, butane-1-sulfonic acid],
- III. [2 α , 4-dicarboxy, butane-1-sulfate],
- IV. [1 α , 3-dicarboxy, propane sulfonic acid],
- V. [1 α , 3-dicarboxy, propane sulfate],
- VI. [1 β , 3-dicarboxy, propane sulfate],
- VII. [1 β , 3-dicarboxy, propane sulfonic acid],
- VIII. [D-glutamic acid, N-sulfonic acid],
- IX. [2 β , 4-dicarboxy, butane-1-sulfonic acid],
- X. [2 β , 4-dicarboxy, butane-1-sulfate],
- XI. [D-glutamic acid, 3 α -sulfonic acid],
- XII. [D-glutamic acid, 3 α -sulfate],
- XIII. [D-glutamic acid, 3 β -sulfonic acid],
- XIV. [D-glutamic acid, 3 β -sulfate],
- XV. [D-glutamic acid, 4 α -sulfonic acid],
- XVI. [D-glutamic acid, 4 α -sulfate],
- XVII. [D-glutamic acid, 4 β -sulfonic acid],
- XVIII. [D-glutamic acid, 3 β -sulfate],
- XIX. [L-glutamine, N-sulfonic acid],
- XX. [2 α -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XXI. [2 α -carboxy, 4-carboxamido, butane-1-sulfate],
- XXII. [1 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XXIII. [1 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XXIV. [1 β -carboxy, 3-carboxamido, propane-1-sulfate],

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- XXV. [1β -carboxy, 3 -carboxamido, propano-1-sulfonic acid],
- XXVI. [D-glutamine, N-sulfonic acid],
- XXVII. [2β -carboxy, 4 -carboxamido, butane-1-sulfonic acid],
- XXVIII. [2β -carboxy, 4 -carboxamido, butane-1-sulfate],
- XXIX. [D-glutamine, 3α -sulfonic acid],
- XXX. [D-glutamine, 3α -sulfate],
- XXXI. [D-glutamine, 3β -sulfonic acid],
- XXXII. [D-glutamine, 3β -sulfate],
- XXXIII. [D-glutamine, 4α -sulfonic acid],
- XXXIV. [D-glutamine, 4α -sulfate],
- XXXV. [D-glutamine, 4β -sulfonic acid],
- XXXVI. [D-glutamine, 4β -sulfate],
- XXXVII. [L-homoglutamic acid, N-sulfonic acid],
- XXXVIII. [Pentane-2 α , 5-dicarboxy-1-sulfonic acid],
- XXXIX. [Pentane-2 α , 5-dicarboxy-1-sulfate],
- XI. [Butane-1 α , 4-dicarboxy-1-sulfonic acid], and
- XLI. [Butane-1 α , 4-dicarboxy-1-sulfate][[,]].

16. (Currently Amended) A compound as claimed in claim 13, wherein said compound is selected from the group consisting of homoglutamic acid, homoglutamine and corresponding de-amino-analogs:

- I. [D-homoglutamic acid, N-sulfonic acid],
- II. [Pentane-2 β , 5-dicarboxy-1-sulfonic acid],
- III. [Pentane-2 β , 5-dicarboxy-1-sulfate],
- IV. [Butane-1 β , 4-dicarboxy-1-sulfonic acid],
- V. [Butane-1 β , 4-dicarboxy-1-sulfate],
- VI. [D-homoglutamic acid, 3α -sulfonic acid],
- VII. [D-homoglutamic acid, 3α -sulfate],
- VIII. [D-homoglutamic acid, 3β -sulfonic acid],
- IX. [D-homoglutamic acid, 3β -sulfate],

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- X. [D-homoglutamic acid, 4 α -sulfonic acid],
- XI. [D-homoglutamic acid, 4 α -sulfate],
- XII. [D-homoglutamic acid, 4 β -sulfonic acid],
- XIII. [D-homoglutamic acid, 4 β -sulfate],
- XIV. [D-homoglutamic acid, 5 α -sulfate],
- XV. [D-homoglutamic acid, 5 α -sulfate],
- XVI. [D-homoglutamic acid, 5 β -sulfonic acid],
- XVII. [D-homoglutamic acid, 5 β -sulfate],
- XVIII. [L-homoglutamine, N-sulfonic acid],
- XIX. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfonic acid],
- XX. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfate],
- XXI. [Butane-1 α -carboxy, 4-carboxamido-1-sulfonic acid],
- XXII. [Butane-1 α -carboxy, 4-carboxamido-1-sulfate],
- XXIII. [D-homoglutamine, N-sulfonic acid],
- XXIV. [Pentane-2 β -carboxy, 5-carboxamido-1-sulfonic acid],
- XXV. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],
- XXVI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],
- XXVII. [D-homoglutamine, 3 α -sulfonic acid],
- XXVIII. [D-homoglutamine, 3 α -sulfate],
- XXIX. [D-homoglutamine, 3 β -sulfonic acid],
- XXX. [D-homoglutamine, 3 β -sulfate],
- XXXI. [D-homoglutamine, 4 α -sulfonic acid],
- XXXII. [D-homoglutamine, 4 α -sulfate],
- XXXIII. [D-homoglutamine, 4 β -sulfonic acid],
- XXXIV. [D-homoglutamine, 4 β -sulfate],
- XXXV. [D-homoglutamine, 5 α -sulfonic acid],
- XXXVI. [D-homoglutamine, 5 α -sulfate],
- XXXVII. [D-homoglutamine, 5 β -sulfonic acid], and
- XXXVIII. [D-homoglutamine, 5 β -sulfate].

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17. (Currently Amended) A compound as claimed in claim 1, wherein incubation of BM leukocyte precursors with different concentrations of the synthetic compound increases the cell surface densities of CD11c, CD80, CD54 and CD11c to various levels with maximum up regulation at 200 mM.
18. (Currently Amended) A compound as claimed in claim 1, wherein it the compound gives the fold increase in the levels of molecules of cells stimulated with either 15 ng/ml of GM-CSF or 200 mM of the synthetic compound at 48 h of incubation.
19. (Currently Amended) A compound as claimed in claim 1, wherein the viability of the cultures is more than 99% at the end of the incubation period at this concentration of the synthetic compound.
20. (Currently Amended) A compound as claimed in claim 1, ~~useful-to-induce~~ wherein the compound is capable of inducing differentiation of dendritic cells and modulation of immune response controlled by dendritic cell ~~cells~~.
21. (Currently Amended) A compound as claimed in claim 1, useful in vaccine formulation comprising a compound of Claim 1, wherein the compound is capable of to prevent providing more efficient and faster presentation of antigens to T-cells, thereby initiate initiating primary protective Th1 immune response and help helping in the clearance of the pathogen.

Claims 22-28 (Cancelled)

29. (Currently Amended) A [[P]]pharmaceutical composition comprising [[the]]] an effective amount of a compound selected from the general formula Z-OC (C R_{n1}R_{n2}) -CO-Z wherein Z = OH or NH₂ and n1 = n2 = 1 to 8, wherein one R in the compound is selected from the group consisting of SO₂II, OSO₂H, CH₂--SO₂II, Cl₂--OSO₂H, and NISO₂II,

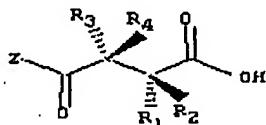
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and the remaining Rs are H or NH₂, and salts thereof, along with an additive, excipient, diluents or carrier.

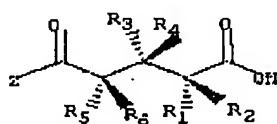
30. (Currently Amended) A composition as claimed in claim 29, wherein said compound useful is capable of being used in vaccine formulation to prevent provide more efficient and faster presentation of antigens to T-cells, thereby initiate initiating primary protective Th1 immune response and help helping in the clearance of the pathogen.

31. (Currently Amended) A composition as claimed in claim 29, wherein said compound having a structure as herein and bearing is a compound of Claim 2 general formula ZOC-
CR₃R₄-CR₁R₂-COOH wherein: Z=OH or NH₂; R₁ to R₄ denotes H, NH₂, SO₃H, or OSO₃H, CH₂-SO₃H, CH₂-OSO₃H, NH₂SO₃H



STRUCTURE 1

32. (Currently Amended) A composition as claimed in claim 29, wherein said compound having a structure as herein and bearing is a compound of Claim 3 structure as shown below and bears the general formula ZOC-
CR₅R₆-CR₃R₄-CR₁R₂-COOH wherein: Z=OH or NH₂; R₁ to R₆ denotes H, NH₂, SO₃H, or OSO₃H, CH₂-SO₃H, CH₂-OSO₃H, or NH₂SO₃H



STRUCTURE 2

33. (Currently Amended) A composition as claimed in claim 29, wherein said compound having a structure as herein and bearing is a compound of Claim 4 general formula ZOC-

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$\text{CR}_1\text{R}_2\text{-CR}_5\text{R}_6\text{-CR}_3\text{R}_4\text{-CR}_4\text{R}_3\text{-COOII}$ wherein: $\text{Z} = \text{OII}$ or NH_2 , R_1 to R_6 denotes H , NH_2 , SO_3H , or OSO_3H , $\text{CH}_2\text{-SO}_3\text{H}$, $\text{CH}_2\text{-OSO}_3\text{H}$, NHOSO_3H



STRUCTURE 3

34. (Currently Amended) A composition as claimed in claim 29, wherein said compound [[in]] is non-toxic to monocytes.
35. (Currently Amended) A composition as claimed in claim 29, wherein said compound [[in]] is non-toxic to macrophages.
36. (Currently Amended) A composition as claimed in claim 29, wherein additives are wherein the composition further comprises an additive comprising different divalent metal cations such as Mg, Ca and Zn.
37. (Currently Amended) A composition as claimed in claim 29, wherein additives are wherein the composition further comprises an additive comprising amino acid/dicarboxylic acid derivatives and their pharmaceutically acceptable selected alkali/alkaline earth metal salts.
38. (Currently Amended) A composition as claimed in claim [[29]]31, wherein the compound is selected from the group consisting of:
 - I. [L-Aspartic acid, N-Sulfonic acid],
 - II. [2 α ,3-dicarboxy, propane-1-sulfonic acid],
 - III. [2 α ,3-dicarboxy, propane-1-sulfato],
 - IV. [1 α ,2-carboxy ethane sulfonic acid],
 - V. [1 α ,2-carboxy ethane sulfate],
 - VI. [D-aspartic acid, N-sulfonic acid],
 - VII. [2 β ,3-carboxy,propane-1-sulfonic acid],

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- VIII. [2 β ,3-carboxy,propane-1-sulfate],
- IX. [1 β ,2-carboxy ethane-1-sulfonic acid],
- X. [1 β ,2-carboxy ethane-1-sulfate],
- XI. [D-aspartic acid, 3 α -sulfonic acid],
- XII. [D-aspartic acid, 3 α -sulfate],
- XIII. [D-aspartic acid, 3 β -sulfonic acid],
- XIV. [D-aspartic acid, 3 β -sulfate],
- XV. [L-asparagine,N-sulfonic acid],
- XVI. [2 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVII. [2 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII. [1 α -carboxy, 2-carboxamido, ethane sulfonic acid],
- XIX. [1 α -carboxy, 2-carboxamido, ethane sulfate],
- XX. [L-asparagine, 3 α -sulfonic acid],
- XXI. [L-asparagine, 3 α -sulfate],
- XXII. [L-asparagine, 3 β -sulfonic acid],
- XXIII. [L-asparagine, 3 β -sulfate],
- XXIV. [D-asparagine, N-sulfonic acid],
- XXV. [2 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XXVI. [2 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XXVII. [1 β -carboxy, 2-carboxamido, ethane sulfonic acid],
- XXVIII. [1 β -carboxy, 2-carboxamido, ethane sulfate],
- XXIX. [D-asparagine, 3 α -sulfonic acid],
- XXX. [D-asparagine, 3 α -sulfate],
- XXXI. [D-asparagine, 3 β -sulfonic acid],
- XXXII. [D-asparagine, 3 β -sulfate],
- XXXIII. [L-glutamic acid, N-sulfonic acid],
- XXXIV. [2 α ,4-dicarboxy, butane-1-sulfonic acid],
- XXXV. [2 α ,4-dicarboxy, butane-1-sulfate],
- XXXVI. [1 α ,3-dicarboxy, propane sulfonic acid],
- XXXVII. [1 α ,3-dicarboxy, propano sulfate],

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XXXVIII. [1 β , 3-dicarboxy, propane sulfone], and
XXXIX. [1 β , 3-dicarboxy, propane sulfonic acid], [.,.]

39. (Currently Amended) A composition as claimed in claim 29 32, wherein the compound is selected from the group consisting of:

- I. [D-glutamic acid, N-sulfonic acid],
- II. 2 β , 4-dicarboxy, butane-1-sulfonic acid],
- III. [2 β , 4-dicarboxy, butane-1-sulfate],
- IV. [D-glutamic acid, 3 α -sulfonic acid],
- V. [D-glutamic acid, 3 α -sulfate],
- VI. [D-glutamic acid, 3 β -sulfonic acid],
- VII. [D-glutamic acid, 3 β -sulfate],
- VIII. [D-glutamic acid, 4 α -sulfonic acid],
- IX. [D-glutamic acid, 4 α -sulfate],
- X. [D-glutamic acid, 4 β -sulfonic acid],
- XI. [D-glutamic acid, 3 β -sulfate],
- XII. [L-glutamine, N-sulfonic acid],
- XIII. [2 α -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XIV. [2 α -carboxy, 4-carboxamido, butane-1-sulfate],
- XV. [1 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVI. [1 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVII. [1 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII. [1 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XIX. [D-glutamine, N-sulfonic acid],
- XX. [2 β -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XXI. [2 β -carboxy, 4-carboxamido, butane-1-sulfate],
- XXII. [D-glutamine, 3 α -sulfonic acid],
- XXIII. [D-glutamine, 3 α -sulfate],
- XXIV. [D-glutamine, 3 β -sulfonic acid],
- XXV. [D-glutamine, 3 β -sulfate],

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- XXVI. [D-glutamine, 4 α -sulfonic acid],
- XXVII. [D-glutamine, 4 α -sulfate],
- XXVIII. [D-glutamine, 4 β -sulfonic acid],
- XXIX. [D-glutamine, 4 β -sulfate],
- XXX. [L-homoglutamic acid, N-sulfonic acid],
- XXXI. [Pentane-2 α , 5-dicarboxy-1-sulfonic acid],
- XXXII. [Pentane-2 α , 5-dicarboxy-1-sulfate],
- XXXIII. [Butane-1 α , 4-dicarboxy-1-sulfonic acid],
- XXXIV. [Butane-1 α , 4-dicarboxy-1-sulfate],
- XXXV. [D-homoglutamic acid, N-sulfonic acid],
- XXXVI. [Pentane-2 β , 5-dicarboxy-1-sulfonic acid],
- XXXVII. [Pentane-2 β , 5-dicarboxy-1-sulfate],
- XXXVIII. [Butane-1 β , 4-dicarboxy-1-sulfonic acid], and
- XXXIX. [Butane-1 β , 4-dicarboxy-1-sulfate],

40. (Currently Amended) A composition as claimed in claim 29 33, wherein the compound is selected from the group consisting of:

- I. [D-homoglutamic acid, 3 α -sulfonic acid],
- II. [D-homoglutamic acid, 3 α -sulfate],
- III. [D-homoglutamic acid, 3 β -sulfonic acid],
- IV. [D-homoglutamic acid, 3 β -sulfate],
- V. [D-homoglutamic acid, 4 α -sulfonic acid],
- VI. [D-homoglutamic acid, 4 α -sulfate],
- VII. [D-homoglutamic acid, 4 β -sulfonic acid],
- VIII. [D-homoglutamic acid, 4 β -sulfate],
- IX. [D-homoglutamic acid, 5 α -sulfate],
- X. [D-homoglutamic acid, 5 α -sulfate],
- XI. [D-homoglutamic acid, 5 β -sulfonic acid],
- XII. [D-homoglutamic acid, 5 β -sulfate],
- XIII. [L-homoglutamine, N-sulfonic acid],

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XIV. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfonic acid],
XV. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfate],
XVI. [Butane-1 α -carboxy, 4-carboxamido-1-sulfonic acid],
XVII. [Butane-1 α -carboxy, 4-carboxamido-1-sulfate],
XVIII. [D-homoglutamine, N-sulfonic acid],
XIX. [Pentane-2 β -carboxy, 5-carboxamido-1-sulfonic acid],
XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],
XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],
XXII. [D-homoglutamine, 3 α -sulfonic acid],
XXIII. [D-homoglutamine, 3 α -sulfate],
XXIV. [D-homoglutamine, 3 β -sulfonic acid],
XXV. [D-homoglutamine, 3 β -sulfate],
XXVI. [D-homoglutamine, 4 α -sulfonic acid],
XXVII. [D-homoglutamine, 4 α -sulfate],
XXVIII. [D-homoglutamine, 4 β -sulfonic acid],
XXIX. [D-homoglutamine, 4 β -sulfate],
XXX. [D-homoglutamine, 5 α -sulfonic acid],
XXXI. [D-homoglutamine, 5 α -sulfate],
XXXII. [D-homoglutamine, 5 β -sulfonic acid], and
XXXIII. [D-homoglutamine, 5 β -sulfate].

41. (Currently Amended) A composition as claimed in claim 29, wherein novel 31, wherein the compound is a sulfonic acid / sulfate derivatives derivative of the compound of Claim 2, formulae ZOC₂CR₃R₄-CR₁R₂-COOH wherein: Z=OH or NH₂, R₁ to R₄ denotes H, NH₂, SO₃H or OSO₃H, CH₂-SO₃H, CH₂-OSO₃H, NHSO₃H

I. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=H, R₁=NHSO₃H
is the same meaning as is before defined;

II. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=H, R₁=CH₂SO₃H
is the same meaning as is before defined;

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III. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

IV. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=H$, $R_1=SO_3H$ is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=H$, $R_1=NHOSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=H$, $R_2=CH_2SO_3H$ is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=H$, $R_2=CH_2OSO_3H$ is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=H$, $R_2=SO_3H$ is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=NHOSO_3H$ is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

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XVII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=SO_3H$ is the same meaning as is before defined;

XIX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

XX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_4=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XXI.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XXII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXIII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XXIV.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=NHSO_3H$ is the same meaning as is before defined;

XXV.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_3=R_4=H$, $R_2=CH_2SO_3H$ is the same meaning as is before defined;

XXVI.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=CH_2OSO_3H$ is the same meaning as is before defined;

XXVII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=SO_3H$ is the same meaning as is before defined;

XXVIII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

XXIX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XXX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_4=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XXXI.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXXII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined.

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42. (Currently Amended) A composition as claimed in claim 29, wherein novel 32, wherein the compound is a sulfonic acid / sulfate derivative of the compound of Claim 3 formulae -ZOC(=CR₅R₆)CR₃R₄-CR₁R₂-COOH, wherein: Z=OH or NH₂, R₁ to R₆ denotes H, NH₂, SO₃H, or OSO₃H, CH₂-SO₃H, CH₂-OSO₃H, NHSO₃H,

- I. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=R₅=R₆=H, R₁=NHSO₃H is the same meaning as is before defined;
- II. A compound as claimed in claim 1, wherein Z=OH, R₃=R₃=R₄=R₅=R₆=H, R₄=CH₂SO₃H is the same meaning as is before defined;
- III. A compound as claimed in claim 1, wherein Z=OH, R₃=R₃=R₄=R₅=R₆=H, R₁=CH₂OSO₃H is the same meaning as is before defined;
- IV. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=R₅=R₆=H, R₄=SO₃H is the same meaning as is before defined;
- V. A compound as claimed in claim 1, wherein Z=OH, R₂=R₃=R₄=R₅=R₆=H, R₁=OSO₃H is the same meaning as is before defined;
- VI. A compound as claimed in claim 1, wherein Z=OH, R₁=R₃=R₄=R₅=R₆=H, R₂=SO₃H is the same meaning as is before defined;
- VII. A compound as claimed in claim 1, wherein Z=OH, R₁=R₃=R₄=R₅=R₆=H, R₂=NHSO₃H is the same meaning as is before defined;
- IX. A compound as claimed in claim 1, wherein Z=OH, R₁=R₃=R₄=R₅=R₆=H, R₂=CH₂SO₃H is the same meaning as is before defined;
- X. A compound as claimed in claim 1, wherein Z=OH, R₁=R₃=R₄=R₅=R₆=H, R₂=CH₂OSO₃H is the same meaning as is before defined;
- XI. A compound as claimed in claim 1, wherein Z=OH, R₁=R₄=R₅=R₆=H, R₂=NH₂, R₃=SO₃H is the same meaning as is before defined;
- XII. A compound as claimed in claim 1, wherein Z=OH, R₁=R₄=R₅=R₆=H, R₂=NH₂, R₃=OSO₃H is the same meaning as is before defined;

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XIII.—A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XIV.—A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XV.—A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_4=R_3=R_6=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

XVI.—A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_4=R_3=R_6=H$, $R_2=NH_2$, $R_5=OSO_3H$ is the same meaning as is before defined;

XVII.—A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

XVIII.—A compound as claimed in claim 1, wherein $Z=OH$, $R_4=R_3=R_5=R_4=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;

XIX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=NH_2SO_3H$ is the same meaning as is before defined;

XX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

XXI.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

XXII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=SO_3H$ is the same meaning as is before defined;

XXIII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

XXIV.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

XXV.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=SO_3H$ is the same meaning as is before defined;

XXVI.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_3=R_4=R_5=R_6=H$, $R_2=NH_2SO_3H$ is the same meaning as is before defined;

XXVII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_3=R_4=R_5=R_6=H$, $R_2=CH_2SO_3H$ is the same meaning as is before defined;

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XXVIII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=H$, $R_2=CH_2OSO_3H$ is the same meaning as is before defined;

XXIX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XXX.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XXXI.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XXXII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XXXIII.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

XXXIV.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XXXV.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

XXXVI.—A compound as claimed in claim 1, wherein $Z=NH_2$, $R_4=R_3=R_5=R_6=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined.

43. (Currently Amended) A composition as claimed in claim 29, wherein ~~novel 33, wherein the compound is a sulfonic acid / sulfate derivatives derivative of the compound of Claim 4 formulae ZOG-CR₁R₂-CR₃R₄-CR₅R₂-COOH, wherein: Z=OH or NH₂, R₁ to R₈ denotes H, NH₂, SO₃H, or OSO₃H, CH₂-SO₃H, CH₂-OSO₃H, NHSO₃H~~

I.—A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=NHSO_3H$ is the same meaning as is before defined;

II.—A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

III.—A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

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IV. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_4=OSO_3H$ is the same meaning as is before defined;

V. A compound as claimed in claim 1, wherein $Z=OH$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_4=OSO_3H$ is the same meaning as is before defined;

VI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NHSO_3H$ is the same meaning as is before defined;

VII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=CH_2OSO_3H$ is the same meaning as is before defined;

VIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=CH_2OSO_3H$ is the same meaning as is before defined;

IX. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=SO_3H$ is the same meaning as is before defined;

X. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

XI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

XIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_4=SO_3H$ is the same meaning as is before defined;

XIV. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;

XV. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;

XVI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=OSO_3H$ is the same meaning as is before defined;

XVII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;

XVIII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;

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XIX. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=OSO_3H$ is the same meaning as is before defined;

XX. A compound as claimed in claim 1, wherein $Z=OII$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=OSO_3H$ is the same meaning as is before defined;

XXI. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=SO_3H$ is the same meaning as is before defined;

XXII. A compound as claimed in claim 1, wherein $Z=OH$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=OSO_3H$ is the same meaning as is before defined;

XXIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=NH_3SO_3H$ is the same meaning as is before defined;

XXIV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2SO_3H$ is the same meaning as is before defined;

XXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=CH_2OSO_3H$ is the same meaning as is before defined;

XXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=SO_3H$ is the same meaning as is before defined;

XXVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_2=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_1=OSO_3H$ is the same meaning as is before defined;

XXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_3SO_3H$ is the same meaning as is before defined;

XXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=CH_2SO_3H$ is the same meaning as is before defined;

XXX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=SO_3H$ is the same meaning as is before defined;

XXXI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_4=R_5=R_6=R_7=R_8=H$, $R_2=OSO_3H$ is the same meaning as is before defined;

XXXII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=SO_3H$ is the same meaning as is before defined;

XXXIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_3=OSO_3H$ is the same meaning as is before defined;

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~~XXXIV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;~~

~~XXXV. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_4=OSO_3H$ is the same meaning as is before defined;~~

~~XXXVI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=SO_3H$ is the same meaning as is before defined;~~

~~XXXVII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_5=OSO_3H$ is the same meaning as is before defined;~~

~~XXXVIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_6=R_7=R_8=H$, $R_2=NH_2$, $R_6=SO_3H$ is the same meaning as is before defined;~~

~~XXXIX. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_8=H$, $R_2=NH_2$, $R_6=OSO_3H$ is the same meaning as is before defined;~~

~~XL. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_6=R_5=R_8=H$, $R_2=NH_2$, $R_7=SO_3H$ is the same meaning as is before defined;~~

~~XLI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_4=R_3=R_5=R_6=R_8=H$, $R_2=NH_2$, $R_7=OSO_3H$ is the same meaning as is before defined;~~

~~XLI. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=SO_3H$ is the same meaning as is before defined;~~

~~XLIII. A compound as claimed in claim 1, wherein $Z=NH_2$, $R_1=R_3=R_5=R_4=R_7=R_6=H$, $R_2=NH_2$, $R_8=OSO_3H$ is the same meaning as is before defined;~~

44. (Currently Amended) A composition as claimed in claim [[29]]38, wherein said compound is non-toxic salts selected from the group consisting of:

- I. [L-Aspartic acid, N-Sulfonic acid],
- II. [2 α ,3-dicarboxy, propane-1-sulfonic acid],
- III. [2 α ,3-dicarboxy, propane-1-sulfate],
- IV. [1 α ,2-carboxy ethane sulfonic acid],
- V. [1 α ,2-carboxy ethane sulfate],
- VI. [D-aspartic acid, N-sulfonic acid],
- VII. [2 β ,3-carboxy,propane-1-sulfonic acid],

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- VIII. [2 β ,3-carboxy,propane-1-sulfate],
- IX. [1 β ,2-carboxy ethane-1-sulfonic acid],
- X. [1 β ,2-carboxy ethane-1-sulfate],
- XI. [D-aspartic acid, 3 α -sulfonic acid],
- XII. [D-aspartic acid, 3 α -sulfate],
- XIII. [D-aspartic acid, 3 β -sulfonic acid],
- XIV. [D-aspartic acid, 3 β -sulfate],
- XV. [L-asparagine,N-sulfonic acid],
- XVI. [2 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVII. [2 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII. [1 α -carboxy, 2-carboxamido, ethane sulfonic acid],
- XIX. [1 α -carboxy, 2-carboxamido, ethane sulfate],
- XX. [L-asparagine, 3 α -sulfonic acid],
- XXI. [L-asparagine, 3 α -sulfate],
- XXII. [L-asparagine, 3 β -sulfonic acid],
- XXIII. [L-asparagine, 3 β -sulfate],
- XXIV. [D-asparagine, N-sulfonic acid],
- XXV. [2 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XXVI. [2 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XXVII. [1 β -carboxy, 2-carboxamido, ethane sulfonic acid],
- XXVIII. [1 β -carboxy, 2-carboxamido, ethane sulfate],
- XXIX. [D-asparagine, 3 α -sulfonic acid],
- XXX. [D-asparagine, 3 α -sulfate],
- XXXI. [D-asparagine, 3 β -sulfonic acid],
- XXXII. [D-asparagine, 3 β -sulfate],
- XXXIII. [L-glutamic acid, N-sulfonic acid],
- XXXIV. [2 α ,4-dicarboxy, butane-1-sulfonic acid],
- XXXV. [2 α , 4-dicarboxy, butane-1-sulfate],
- XXXVI. [1 α , 3-dicarboxy, propane sulfonic acid],
- XXXVII. [1 α , 3-dicarboxy, propane sulfate],

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XXXVIII. [1 β , 3-dicarboxy, propane sulfate], andXXXIX. [1 β , 3-dicarboxy, propane sulfonic acid], [.,.]

45. (Currently Amended) A composition as claimed in claim [[29]]39, wherein said compound is non-toxic salts selected from the group consisting of:

- I. [D-glutamic acid, N-sulfonic acid],
- II. [2 β , 4-dicarboxy, butane-1-sulfonic acid],
- III. [2 β , 4-dicarboxy, butane-1-sulfate],
- IV. [D-glutamic acid, 3 α -sulfonic acid],
- V. [D-glutamic acid, 3 α -sulfate],
- VI. [D-glutamic acid, 3 β -sulfonic acid],
- VII. [D-glutamic acid, 3 β -sulfate],
- VIII. [D-glutamic acid, 4 α -sulfonic acid],
- IX. [D-glutamic acid, 4 α -sulfate],
- X. [D-glutamic acid, 4 β -sulfonic acid],
- XI. [D-glutamic acid, 3 β -sulfate],
- XII. [L-glutamine, N-sulfonic acid],
- XIII. [2 α -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XIV. [2 α -carboxy, 4-carboxamido, butane-1-sulfate],
- XV. [1 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVI. [1 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVII. [1 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII. [1 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XIX. [D-glutamine, N-sulfonic acid],
- XX. [2 β -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XXI. [2 β -carboxy, 4-carboxamido, butane-1-sulfate],
- XXII. [D-glutamine, 3 α -sulfonic acid],
- XXIII. [D-glutamine, 3 α -sulfate],
- XXIV. [D-glutamine, 3 β -sulfonic acid],
- XXV. [D-glutamine, 3 β -sulfate],

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- XXVI. [D-glutamine, 4 α -sulfonic acid],
- XXVII. [D-glutamine, 4 α -sulfate],
- XXVIII. [D-glutamine, 4 β -sulfonic acid],
- XXIX. [D-glutamine, 4 β -sulfate],
- XXX. [L-homoglutamic acid, N-sulfonic acid],
- XXXI. [Pentane-2 α , 5-dicarboxy-1-sulfonic acid],
- XXXII. [Pentane-2 α , 5-dicarboxy-1-sulfate],
- XXXIII. [Butane-1 α , 4-dicarboxy-1-sulfonic acid],
- XXXIV. [Butane-1 α , 4-dicarboxy-1-sulfate],
- XXXV. [D-homoglutamic acid, N-sulfonic acid],
- XXXVI. [Pentane-2 β , 5-dicarboxy-1-sulfonic acid],
- XXXVII. [Pentane-2 β , 5-dicarboxy-1-sulfate],
- XXXVIII. [Butane-1 β , 4-dicarboxy-1-sulfonic acid], and
- XXXIX. [Butane-1 β , 4-dicarboxy-1-sulfate]. [[,]]

[[45]]46. (Currently Amended) A composition as claimed in claim [[29]]40, wherein said compound is non-toxic salts selected from the group consisting of:

- I. [D-homoglutamic acid, 3 α -sulfonic acid],
- II. [D-homoglutamic acid, 3 α -sulfate],
- III. [D-homoglutamic acid, 3 β -sulfonic acid],
- IV. [D-homoglutamic acid, 3 β -sulfate],
- V. [D-homoglutamic acid, 4 α -sulfonic acid],
- VI. [D-homoglutamic acid, 4 α -sulfate],
- VII. [D-homoglutamic acid, 4 β -sulfonic acid],
- VIII. [D-homoglutamic acid, 4 β -sulfate],
- IX. [D-homoglutamic acid, 5 α -sulfate],
- X. [D-homoglutamic acid, 5 α -sulfate],
- XI. [D-homoglutamic acid, 5 β -sulfonic acid],
- XII. [D-homoglutamic acid, 5 β -sulfate],
- XIII. [L-homoglutamine, N-sulfonic acid],

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- XIV. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfonic acid],
- XV. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfate],
- XVI. [Butane-1 α -carboxy, 4-carboxamido-1-sulfonic acid],
- XVII. [Butane-1 α -carboxy, 4-carboxamido-1-sulfate],
- XVIII. [D-homoglutamine, N-sulfonic acid],
- XIX. [Pentane-2 β -carboxy, 5-carboxamido-1-sulfonic acid],
- XX. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],
- XXI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],
- XXII. [D-homoglutamine, 3 α -sulfonic acid],
- XXIII. [D-homoglutamine, 3 α -sulfate],
- XXIV. [D-homoglutamine, 3 β -sulfonic acid],
- XXV. [D-homoglutamine, 3 β -sulfate],
- XXVI. [D-homoglutamine, 4 α -sulfonic acid],
- XXVII. [D-homoglutamine, 4 α -sulfate],
- XXVIII. [D-homoglutamine, 4 β -sulfonic acid],
- XXIX. [D-homoglutamine, 4 β -sulfate],
- XXX. [D-homoglutamine, 5 α -sulfonic acid],
- XXXI. [D-homoglutamine, 5 α -sulfate],
- XXXII. [D-homoglutamine, 5 β -sulfonic acid], and
- XXXIII. [D-homoglutamine, 5 β -sulfate].

[[46]]42. (Currently Amended) A composition as claimed in claim [[29]]44, wherein said compound is selected from the group consisting of aspartic acid, asparagine and corresponding de-amino analogs:

- I. [L- Aspartic acid, N-Sulfonic acid],
- II. [2 α ,3-dicarboxy, propane-1-sulfonic acid],
- III. [2 α ,3-dicarboxy, propane-1-sulfate],
- IV. [1 α ,2-carboxy ethane sulfonic acid],
- V. [1 α ,2-carboxy ethane sulfate],
- VI. [D-aspartic acid, N-sulfonic acid],

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- VII. [2 β ,3-carboxy,propane-1-sulfonic acid],
- VIII. [2 β ,3-carboxy,propane-1-sulfate],
- IX. [1 β ,2-carboxy ethane-1-sulfonic acid],
- X. [1 β ,2-carboxy ethane-1-sulfate],
- XI. [D-aspartic acid, 3 α -sulfonic acid],
- XII. [D-aspartic acid, 3 α -sulfate],
- XIII. [D-aspartic acid, 3 β -sulfonic acid],
- XIV. [D-aspartic acid, 3 β -sulfate],
- XV. [L-asparagine,N-sulfonic acid],
- XVI. [2 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XVII. [2 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XVIII. [1 α -carboxy, 2-carboxamido, ethane sulfonic acid],
- XIX. [1 α -carboxy, 2-carboxamido, ethane sulfate],
- XX. [L-asparagine, 3 α -sulfonic acid],
- XXI. [L-asparagine, 3 α -sulfate],
- XXII. [L-asparagine, 3 β -sulfonic acid],
- XXIII. [L-asparagine, 3 β -sulfate],
- XXIV. [D-asparagine, N-sulfonic acid],
- XXV. [2 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XXVI. [2 β -carboxy, 3-carboxamido, propano-1-sulfate],
- XXVII. [1 β -carboxy, 2-carboxamido, ethane sulfonic acid],
- XXVIII. [1 β -carboxy, 2-carboxamido, ethane sulfate],
- XXIX. [D-asparagine, 3 α -sulfonic acid],
- XXX. [D-asparagine, 3 α -sulfate],
- XXXI. [D-asparagine, 3 β -sulfonic acid], and
- XXXII. [D-asparagine, 3 β -sulfate].[.]

[[47]]48. (Currently Amended) A composition as claimed in claim [[29]]45, wherein said compound is selected from the group consisting of glutamic acid,--glutamine--and corresponding de-amino analogs:

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- I. [L-glutamic acid, N-sulfonic acid],
- II. [2 α ,4-dicarboxy, butane-1-sulfonic acid],
- III. [2 α , 4-dicarboxy, butane-1-sulfate],
- IV. [1 α , 3-dicarboxy, propane sulfonic acid],
- V. [1 α , 3-dicarboxy, propane sulfate],
- VI. [1 β , 3-dicarboxy, propane sulfate],
- VII. [1 β , 3-dicarboxy, propane sulfonic acid],
- VIII. [D-glutamic acid, N-sulfonic acid],
- IX. [2 β , 4-dicarboxy, butane-1-sulfonic acid],
- X. [2 β , 4-dicarboxy, butane-1-sulfate],
- XI. [D-glutamic acid, 3 α -sulfonic acid],
- XII. [D-glutamic acid, 3 α -sulfate],
- XIII. [D-glutamic acid, 3 β -sulfonic acid],
- XIV. [D-glutamic acid, 3 β -sulfate],
- XV. [D-glutamic acid, 4 α -sulfonic acid],
- XVI. [D-glutamic acid, 4 α -sulfate],
- XVII. [D-glutamic acid, 4 β -sulfonic acid],
- XVIII. [D-glutamic acid, 3 β -sulfate],
- XIX. [L-glutamine, N-sulfonic acid],
- XX. [2 α -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XXI. [2 α -carboxy, 4-carboxamido, butane-1-sulfate],
- XXII. [1 α -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XXIII. [1 α -carboxy, 3-carboxamido, propane-1-sulfate],
- XXIV. [1 β -carboxy, 3-carboxamido, propane-1-sulfate],
- XXV. [1 β -carboxy, 3-carboxamido, propane-1-sulfonic acid],
- XXVI. [D-glutamine, N-sulfonic acid],
- XXVII. [2 β -carboxy, 4-carboxamido, butane-1-sulfonic acid],
- XXVIII. [2 β -carboxy, 4-carboxamido, butane-1-sulfate],
- XXIX. [D-glutamine, 3 α -sulfonic acid],
- XXX. [D-glutamine, 3 α -sulfate],

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- XXXI. [D-glutamine, 3 β -sulfonic acid],
- XXXII. [D-glutamine, 3 β -sulfate],
- XXXIII. [D-glutamine, 4 α -sulfonic acid],
- XXXIV. [D-glutamine, 4 α -sulfate],
- XXXV. [D-glutamine, 4 β -sulfonic acid],
- XXXVI. [D-glutamine, 4 β -sulfate],
- XXXVII. [L-homoglutamic acid, N-sulfonic acid],
- XXXVIII. [Pentane-2 α , 5-dicarboxy-1-sulfonic acid],
- XXXIX. [Pentane-2 α , 5-dicarboxy-1-sulfate],
- XL. [Butane-1 α , 4-dicarboxy-1-sulfonic acid], and
- XLI. [Butane-1 α , 4-dicarboxy-1-sulfate].[[.]]

[[48]]49. (Currently Amended) A composition as claimed in claim [[29]]46, wherein said compound is selected from the group consisting of homoglutamic acid, homoglutamine and corresponding de-amino-analogs:

- I. [D-homoglutamic acid, N-sulfonic acid],
- II. [Pentane-2 β , 5-dicarboxy-1-sulfonic acid],
- III. [Pentane-2 β , 5-dicarboxy-1-sulfate],
- IV. [Butane-1 β , 4-dicarboxy-1-sulfonic acid],
- V. [Butane-1 β , 4-dicarboxy-1-sulfate],
- VI. [D-homoglutamic acid, 3 α -sulfonic acid],
- VII. [D-homoglutamic acid, 3 α -sulfate],
- VIII. [D-homoglutamic acid, 3 β -sulfonic acid],
- IX. [D-homoglutamic acid, 3 β -sulfate],
- X. [D-homoglutamic acid, 4 α -sulfonic acid],
- XI. [D-homoglutamic acid, 4 α -sulfate],
- XII. [D-homoglutamic acid, 4 β -sulfonic acid],
- XIII. [D-homoglutamic acid, 4 β -sulfate],
- XIV. [D-homoglutamic acid, 5 α -sulfate],
- XV. [D-homoglutamic acid, 5 α -sulfato],

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- XVI. [D-homoglutamic acid, 5 β -sulfonic acid],
- XVII. [D-homoglutamic acid, 5 β -sulfate],
- XVIII. [L-homoglutamine, N-sulfonic acid],
- XIX. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfonic acid],
- XX. [Pentane-2 α -carboxy, 5-carboxamido-1-sulfate],
- XXI. [Butane-1 α -carboxy, 4-carboxamido-1-sulfonic acid],
- XXII. [Butane-1 α -carboxy, 4-carboxamido-1-sulfate],
- XXIII. [D-homoglutamine, N-sulfonic acid],
- XXIV. [Pentane-2 β -carboxy, 5-carboxamido-1-sulfonic acid],
- XXV. [Butane-1 β -carboxy, 4-carboxamido-1-sulfonic acid],
- XXVI. [Butane-1 β -carboxy, 4-carboxamido-1-sulfate],
- XXVII. [D-homoglutamine, 3 α -sulfonic acid],
- XXVIII. [D-homoglutamine, 3 α -sulfate],
- XXIX. [D-homoglutamine, 3 β -sulfonic acid],
- XXX. [D-homoglutamine, 3 β -sulfate],
- XXXI. [D-homoglutamine, 4 α -sulfonic acid],
- XXXII. [D-homoglutamine, 4 α -sulfate],
- XXXIII. [D-homoglutamine, 4 β -sulfonic acid],
- XXXIV. [D-homoglutamine, 4 β -sulfate],
- XXXV. [D-homoglutamine, 5 α -sulfonic acid],
- XXXVI. [D-homoglutamine, 5 α -sulfate],
- XXXVII. [D-homoglutamine, 5 β -sulfonic acid], and
- XXXVIII. [D-homoglutamine, 5 β -sulfate].